

REMARKS

The Examiner's Action mailed on June 12, 2008, has been received and its contents carefully considered. Additionally attached to this Amendment is a Request for Continued Examination (RCE).

In this Amendment, Applicant has amended claims 1 and 16, canceled claims 13 and 14, and added claims 24 and 25. Claims 1-8, 10-11, and 16-25 are pending in the application, while claims 2-8 and 11 are withdrawn from consideration. Claims 1 and 16 have been amended to add features supported by Applicant's Figures 1, 2(a), 2(B) and 3(A)-3(c). Claims 1 and 16 are the independent claims. For at least the following reasons, it is submitted that this application is in condition for allowance.

The Examiner's Action rejects claims 1, 16, 18, 19 and 20-23 as being obvious over *Ogawa* (USP 4,418, 284) in view of *Paek* (USP 6,740,950), and further in view of *Yamaji* (USP 6,159,837). It is respectfully submitted that the invention now defined by these claims is clearly patentable over the cited references for at least the following reasons.

Claim 1 is directed to a semiconductor device which includes, *inter alia*, an insulating film, a light-transmitting portion, wiring patterns, post portions, a sealing layer, and external terminals. As is illustrated by way of an example in Applicant's Figure 2B, the insulating film 18 is provided over a main surface 5a of a semiconductor chip 5.

In addition, Claim 1 has been amended to further recite, referring to the reference numbers of Figure 2B for purpose of explanation only, that the insulating film 18 has a first region and a second region, and the light-transmission portion 17 is disposed on a surface of the first region of the insulating film 18, and the second region

of the insulating film 18 surrounds the first pads 16 so as to expose surface portions of said first pads, and the first and second regions of the first pads 16 have substantially the same thickness. Applicant's Figure 2A also supports that the first region of the film 18 is a portion on which the light-transmission portion 17 is disposed, and the second region is the remaining portion of the film 18.

Claim 1 has been further amended to recite that a combination of the wiring patterns and the post portions has substantially the same thickness as the light-transmitting portion. As shown in Applicant's Figures 2B, 3C and 1, the combination of the elements 24 and 26 as thick as the light-transmitting portion 17. These features of the invention are not disclosed or suggested by the cited references.

Ogawa discloses a solid-state color-image sensor with a light-shield layer covering desired portions so as to prevent noise. The Examiner equates a resin film 13 disclosed by *Ogawa* with the claimed insulating film.

However, the resin layer 13 shown in Figure 3 of *Ogawa* does not have any region that **surrounds** the bonding pads 6, as would be required by amended claim 1. Because *Ogawa*'s bonding pads 6 are disposed outside the resin layer 13, *Ogawa*'s resin layer 13 is formed only directly below the glass substrate 17 (see *Ogawa* Figure 3).

In addition, *Ogawa* does not disclose or suggest that the pads 6 are surrounded by any resin layer that has substantially **the same thickness** as the resin film 13 disposed under the glass substrate 7, as recited in amended claim 1.

In addition, as is noted by the Examiner, *Ogawa* does not disclose or suggest the wiring patterns, the post portions, the sealing layer, and the external terminals, as recited in claim 1.

The Examiner further relies on *Paek* and *Yamaji* in rejecting the claims. However, these references do not overcome the above-noted deficiencies of *Ogawa* presented above with respect to the claimed insulating film.

Paek does not disclose or suggest any layer that can be equated with the claimed insulating film (see *Paek*, Figure 7).

Yamaji shows an insulating film 3 (see *Yamaji*, Figure 4). However, because no light-transmitting portion is disclosed or suggested by *Yamaji*, *Yamaji* fails to disclose or suggest that any portion of the insulating film 3 is disposed under a **light-transmitting portion**. Accordingly, *Yamaji*'s insulating film 3 can not be equated with the claimed insulating film that has the first region, on which the **light-transmission portion** is disposed, that has **the same thickness** of the second region.

Further, the Examiner relies on the teachings from *Yamaji*, to overcome the above-admitted deficiencies with regard to the claimed wiring patterns and post portions, by equating *Yamaji*'s wiring patterns 4 and post portions 7 (see *Yamaji*, Figure 4) with the claimed wiring patterns and post portions.

However, because no light-transmitting portion is disclosed or suggested by *Yamaji* as noted above, there is no disclosure or suggestion that a combination of *Yamaji*'s wiring patterns 4 and post portions 7 has substantially the same thickness as any light-transmitting portion, as recited in amended claim 1.

In addition, a first level at which the top surface of *Ogawa's* bonding pad 6 is disposed, is much lower than a second level at which the bottom surface of *Ogawa's* glass substrate is disposed (see Figure 3). Thus, even assuming *Ogawa* would be modified by *Yamaji*, the combination of the wiring patterns and post portions should be arranged to extend from the first level to the second level. Here, the distance between the first and second levels is greater than the thickness of *Ogawa's* glass substrate 7. Thus, the combination of wiring patterns and post portions in *Ogawa's* device modified by *Yamaji* can not have the same thickness as *Ogawa's* glass substrate 7.

It is thus submitted that Applicant's independent claim 1, and claims 19, 22 and 23 depending from claim 1, are *prima facie* patentably distinguishable over the cited references.

Claim 16 also recites a light-transmitting member, an insulating film, a wiring pattern over the insulating film, a post electrode formed on the wiring pattern, an external terminal formed on a top surface of the post electrode, and a sealing layer. Claim 16 has been also amended to further recite the insulating film, wiring pattern, and post electrode similar to those recited in amended claim 1. Thus, independent claim 16, and claims 18, 20 and 21 depending from claim 16, are *prima facie* patentably distinguishable over the cited references for at least the same reasons as claim 1, as well as for the additional features recited therein.

The Examiner's Action also rejects claims 10 and 17, as being obvious over *Ogawa* in view of *Paek* and *Yamaji*, and further in view of *Lanford* (USP 5,959,358). Because *Lanford* does not overcome the above-noted deficiencies of *Ogawa*, *Paek* and *Yamaji*, and because claims 10 and 17 depend respectively from independent claims 1

and 16, it is submitted that claims 10 and 17 are *prima facie* patentably distinguishable over the cited references for at least the same reasons as independent claims 1 and 16, as well as for the additional features recited therein.

Because new claims 24 and 25 depend respectively from independent claims 1 and 16, it is submitted that these claims are *prima facie* patentably distinguishable over the cited references for at least the same reasons as independent claims 1 and 16, as well as for the additional features recited therein.

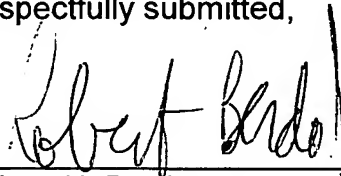
In addition, claims 24 and 25 further recite that, as exemplary shown in Applicant's Figures 2B and 3B, the light-transmission portion 17 **directly contacts** the surface of the first region of the insulating film 18. In contrast, the glass substrate 7 of *Ogawa* is space apart from the resin film 13, with the adhesive layer 14 being sandwiched between the glass substrate 7 and the resin film 13 (see Figure 3).

It is thus submitted that this application is in condition for allowance. Such action and the passing of this case to issue are requested.

Should the Examiner feel that a conference would help to expedite the prosecution of the application, the Examiner is hereby invited to contact the undersigned counsel to arrange for such an interview.

An RCE fee is submitted herewith. Should the remittance be missing or in an inadequate amount, or should any additional fees be requested, however, the Commissioner is hereby authorized to charge the fees to our deposit account No. 18-0002, and is requested to notify us accordingly.

Respectfully submitted,



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Date

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